Erfan Loghmani

Curriculum Vitae/Resume

Education

2021–present **Ph.D. in Quantitative Marketing**, *University of Washington - Michael G. Foster School of Business*, Current GPA: 3.77.

Relevant courses, *Microeconomics & Econometrics Sequence, Interactive Learning, Dynamic Choice Models, Applied Microeconomics, Non-cooperative Game Theory, Natural Language Processing, Empirical Industrial Organization, Machine Learning for Big Data*.

Supervised By:, *Prof. Hema Yoganarasimhan, Prof. Lalit Jain*.

2018–2021 **Master of Science in Artificial Intelligence**, *Sharif University of Technology*, Tehran Iran.

2014–2018 **Bachelor of Science in Computer Engineering**, *Sharif University of Technology*, Tehran Iran.

Fields of Interest

Applied Microeconomics, Adaptive Experimentation, Advertising/Pricing, Causal Inference, Machine Learning, Social Data Analysis

Research Experience

working on **Effective Adaptive Exploration of Prices and Promotions in Choice-Based Demand Models**, *Foster School of Business, Supervised By Prof. Jain and Prof. Yoganarasimhan*.
In this project, we consider the problem of setting optimal prices and promotions for a number of products in a category. Using the Thompson Sampling approach, we develop a regret-minimizing algorithm for the retailer to simultaneously find optimal prices and promotions in an interactive environment. We prove and leverage some properties of the demand model to solve the initially untractable optimization problems needed by the Thompson Sampling method.

2022 **Contextual Bandits with Noisy Contexts and Cohort Information**, *Foster School of Business*, Supervised By Prof. Jain and Prof. Yoganarasimhan.
We introduced a contextual bandit setting that incorporates noisy user features and availability of cohort information. We showed that standard contextual bandits can fail in this setting and proposed a new algorithm that overcomes the challenges of this setting.

2020 **Representation Learning on Dynamic Graphs**, *Sharif University of Technology*, Supervised By Prof. Fazli.
In this project, we designed an online learning method for graph-structured data that could be used for tasks like link prediction or node classification. We fixed a problem in the loss function that improved the model's accuracy and training time.

2018 **Profiling Researchers Based on Features Extracted from Articles and Citations**, *Sharif University of Technology*, Supervised By Prof. Motahari.
We developed a mathematical model for evaluating scientific researchers. Our proposed model improves on two existing probabilistic models, R-model & Q-model, by incorporating an iterative strategy to obtain a better quantitate evaluation of the researchers.

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Publications

- **Loghmani, E.**, Fazli, M., Effect of Choosing Loss Function when Using T-batching for Representation Learning on Dynamic Networks , 2021 (Under Review in Information Sciences)
- Fazli, M., Alian, P., Owfi, A., **Loghmani, E.**, RPS: Portfolio Asset Selection using Graph based Representation Learning, 2021 ArXiv

Work Experience

Technical Team Member — **Rooberah.co**, *July 2019 - July 2020, June 2021 - August 2021*.
We developed a software as a service platform that helps online stores to increase their sales. My responsibility was to design and implement back-end and front-end codes which introduce new features to the product.

Software Engineer — **Pushe.co**, *May 2018 - Febuary 2019*.
I started my work as a backend developer working with the Django web framework. I then moved to the Data team, where I designed and implemented different data science methods on the to solve problems like fraud detection and CTR prediction during this experience.

Poster Presentation

2019 — **Representation Learning on Dynamic Graphs**, *ICTP Workshop on Science of Data Science*, Trieste Italy.

Teaching Experience

Teaching assistant — Pricing Strategy and Analytics, Spring 2022, Winter 2023

Teaching assistant — Customer Analytics, Fall 2022

Teaching assistant — Analytics for Marketing Decisions, Winter 2022

Teaching assistant — Convex Optimization, Spring 2020

Teaching assistant — Engineering Probability and Statistics, Spring 2020, Fall 2017, Spring 2017

Teaching assistant — Social and Economic Networks, Fall 2019, Spring 2018

Teaching assistant — Data Structures and Algorithms, Fall 2016

Academic Service

2015–2017 — Member of the Student Scientific Chapter (SSC), Computer Engineering Department of Sharif University of Technology, SSC is the student committee concerned with directing the department extra-curriculum activities.

Computer skills

Advanced — PYTHON (PyTorch, Tensorflow, Pandas), C/C++

Intermediate — R, Stata, Matlab, Bash, PHP, javascript, Java, HTML, LaTeX, Linux

Familiar with — Octave, Scala